ABSTRACT:

In the present research, an experimental investigation in lost foam casting of an aluminum-silicon cast alloy, LM6, was conducted. The main objective of the study was to investigate the effect of different sand size and vibration time on the surface roughness of thin-wall castings. A stepped pattern with a 3 mm section in the thinnest step was used for the investigation. A full 2-level factorial design experimental technique was used to identify the significant factors which affect the surface roughness of casting. The results were evaluated by means of variance analysis. It is founded that surface roughness deteriorates with higher sand grain size and vice versa. In contrast, vibration time was found has no significant effect to the quality of casting surface.